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Oil and Gas Exploration and Leasing within the Washakie Wilderness

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Summary
of the

Draft Environmental
Impact Statement



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Draft Environmental Impact Statement

02-00-81-09

For Geophysical Investigations and for Oil and Gas Leasing in the Washakie Wilderness, Shoshone National Forest - Fremont, Hot Springs, and Park Counties, Wyoming.

LEAD AGENCY:

USDA - FOREST SERVICE

COOPERATING AGENCIES:

USDI - Bureau of Land Mgmt.
P.O. Box 1828
Cheyenne, Wyoming 82001

USDI - Geological Survey
P.O. Box 2859
Casper, Wyoming 82602

USDI - Fish & Wildlife Service
P.O. Box 25486
Denver, Colorado 80225

Wyoming Game and Fish Dept.
State of Wyoming
Cheyenne, Wyoming 82002

RESPONSIBLE OFFICIALS:

Craig W. Rupp, Regional Forester,
Rocky Mtn. Region, for Making Oil
& Gas Leasing Recommendations and
Identifying the Reasonable
Stipulations Required by the
Wilderness Act

Randall R. Hall, Forest Supv.
Shoshone National Forest
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ABSTRACT: This Draft Environmental Impact Statement discloses the estimated environmental consequences of a proposed action and alternatives to that action regarding geophysical investigations and oil and gas leasing within the 687,132-acre Washakie Wilderness and four areas containing 44,041 acres recommended by the Administration for addition to the Washakie Wilderness. Seven alternatives were considered in detail. They are: Alternative I - Geophysical Investigation and Leasing of the Entire Wilderness; Alternative II - Deny Geophysical Investigations and Leasing (No Action); Alternative III - Geophysical Investigation and Limited Exploratory Drilling on Lands with a High to Moderate Potential of Restoration to a Near Natural-Appearing Condition - Defer Leasing; Alternative IV - Geophysical Investigation and Limited Leasing Including Lands with a High Potential of Restoration to a Near Natural-Appearing Condition; Alternative V - Geophysical Investigation with Limited Leasing Along the Perimeter Including Lands with a High to Moderate Potential of Restoration to a Near Natural-Appearing Condition; Alternative VI - Geophysical Investigation and Limited Leasing of Lands (Including Isolated Tracts) with a High to Moderate Potential of Restoration to a Near Natural-Appearing Condition; and Alternative VII - Geophysical Investigation and Limited Leasing Including Lands with a High to Low Potential of Restoration to a Near Natural-Appearing Condition. Alternative I is the proposed action; Alternative V is the Forest Service's preferred alternative.

Comments regarding this Draft Environmental Impact Statement should be sent to the Forest Supervisor, Shoshone National Forest, by _____.

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SUMMARY

Purpose and Need



Upper Greybull River Drainage

This Environmental Impact Statement (EIS) discloses the potential environmental consequences of issuing geophysical prospecting permits and oil and gas leases within the Washakie Wilderness and four recommended additions to the Wilderness. This is in response to 135 leasing proposals covering 480,000 acres received as of September 1, 1981. Because additional leasing proposals are anticipated, this EIS covers not only recommendations on pending lease applications, but will form a basis for responding to all new applications for leasing within the area as well.

The Washakie Wilderness and four recommended additions include 731,173 acres. The DuNoir Special Management Unit (29,000) Sleeping Giant A (1,750 acres), Sleeping Giant C (2,355 acres), and South Fork B (10,949 acres) were recommended by the Administration for wilderness designation as a result of the Roadless Area Review and Evaluation (RARE II). To date, Congress has not acted on these recommendations. The total area is collectively referred to as the Washakie Wilderness or the "Wilderness" throughout this document.

This EIS analyzes and discloses potential environmental impacts of the following actions:

- ... Processing of future geophysical prospecting permits by the Forest Service for geophysical investigations;
- ... Making issuance recommendations and decisions on 135 pending oil and gas leases with appropriate stipulations for the management of surface resources; and
- ... Processing of future oil and gas lease applications.

The actions dealt with in this EIS fall under both a project- and program-type of EIS. The 135 pending oil and gas lease applications with stipulations is a project-type action. The processing of future prospecting permits and of oil and gas lease applications is a program-type of action (National Environmental Policy Act Regulations, 40 CFR 1500.4(i)). The Forest Service intends to use this EIS in responding to future prospecting permit and oil and gas lease applications in the Washakie Wilderness and to set the stage for dealing with operating plans for any leases which the Bureau of Land Management (BLM) may issue in the Washakie. This use of an EIS in reviewing subsequent actions is known as "tiering". Tiering is authorized by 40 CFR 1502.20.

This EIS discloses the potential impacts of the Forest Service issuing geophysical prospecting permits for the purpose of making geophysical surveys which provide information on geologic characteristics. These permits are issued by the Forest Supervisor. Geophysical investigations are used to determine the best location for exploratory drilling. These permits may be issued either prior to or after a lease is issued. Geophysical prospecting permits neither grant the permittee rights to any minerals found nor preference rights for a lease for any minerals. To date, the subsurface geology of the area remains largely unknown. The Forest Service has not received any applications for geophysical permits within the Washakie Wilderness, but it is reasonable to expect that applications will be filed. A permit for geophysical investigation was issued for the DuNoir Special Management Unit. The work was done by helicopter access and was completed in Spring of 1981.

This EIS covers Forest Service issuance of geophysical investigation permits and Forest Service recommendations to BLM on leases pending and future lease issuance and reasonable stipulations to be attached to leases. It also discusses the general consequences of surface disturbing activities that would be associated with exploration and development on the lease and the construction of ancillary facilities off the lease. When these surface disturbing activities are proposed, a site-specific environmental analysis will be prepared.

Federal oil and gas leasing (subsurface resources) is administered by the Department of the Interior, specifically the BLM and Geological Survey (GS). Routinely, the BLM asks for a Forest Service report and recommendation regarding issuance of proposed leases that include National Forest System lands, according to the December 1980 Memorandum of Understanding between the agencies. These leasing recommendations of the Forest Service are made by the Regional Forester. In addition, the BLM asks the Forest Service to provide appropriate terms and conditions (i.e., stipulations) to be included in the lease for the management of surface resources and improvements, if issuance is recommended. The Wilderness Act of 1964 requires the inclusion of the Forest Service stipulations in leases covering National Forest System lands which have been designated as wilderness by Congress.

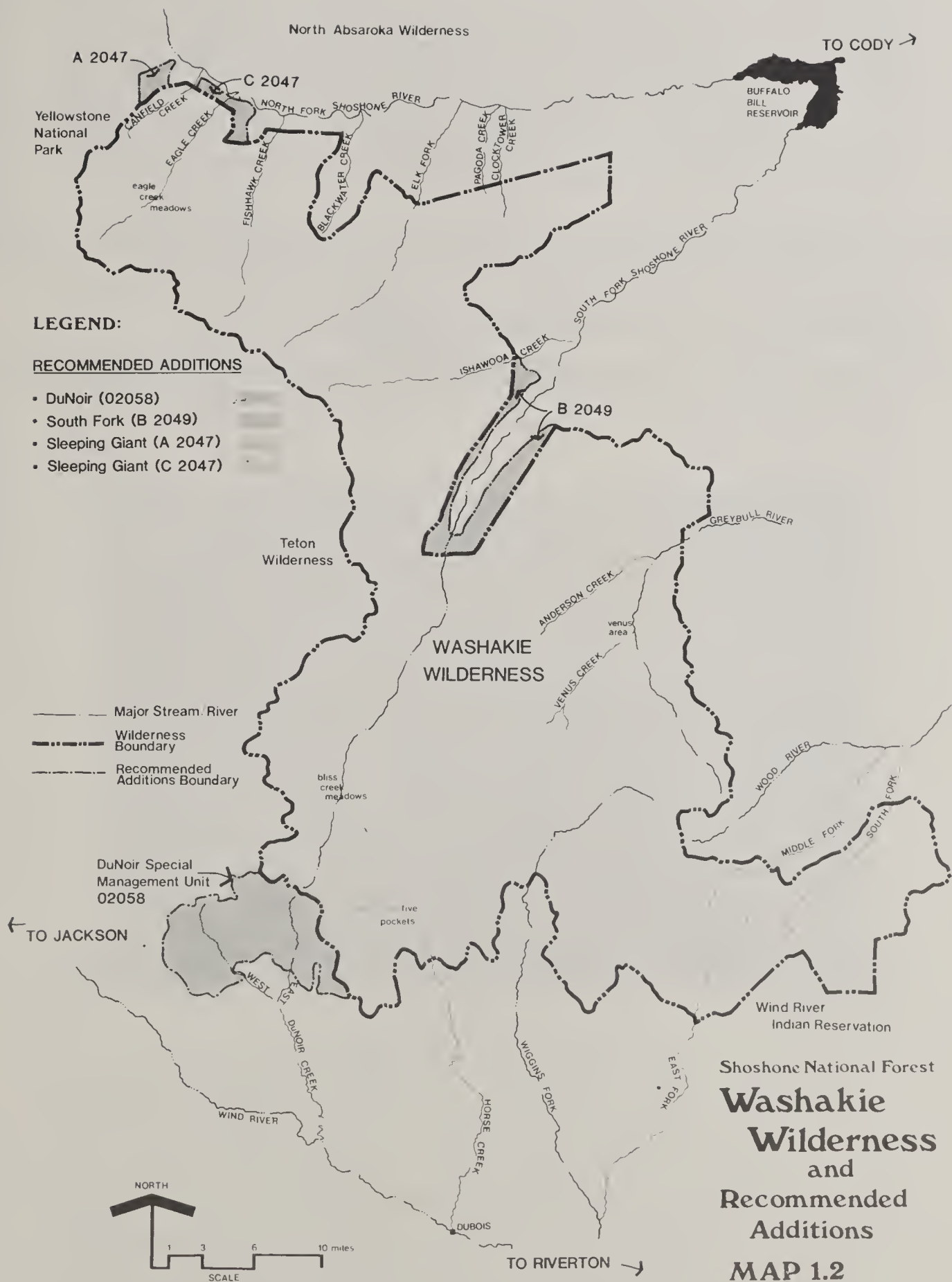


ORIENTATION



LOCATION MAP

MAP 1.1



This EIS is not a decision document in and of itself. It is a document disclosing the potential environmental consequences of implementing the proposed action and alternatives to the proposed action. The Forest Service will use the EIS in making its decisions related to the issuance of geophysical prospecting permits and to the issuance recommendations of oil and gas leases which will be sent to BLM. The BLM, as a cooperating agency, intends to adopt this EIS for making its decisions on issuance of oil and gas leases in the Washakie Wilderness. Decisions of the Forest Service and BLM will be documented in separate Records of Decision.

The environmental consequences of the proposed action and six alternatives to that action are disclosed in detail in this EIS. Four other alternatives were considered but were eliminated from detailed analysis. The Bureau of Land Management, Geological Survey, Fish and Wildlife Service, and Wyoming Game and Fish Department cooperated in developing alternatives to the proposed action and disclosing the potential environmental consequences.

Many laws, regulations, and policies pertain to oil and gas exploration and leasing in wilderness. Following is a list of some of the significant legislation which must be considered in the formulating and analyzing alternatives and in making a decision.

- ... Wilderness Act of 1964.
- ... Mineral Lands Leasing Act of 1920.
- ... National Materials and Minerals Policy Research and Development Act of 1980.
- ... Organic Act of 1897.
- ... Clean Water Act.
- ... Wild and Scenic Rivers Act, as amended.
- ... Endangered Species Act of 1973.
- ... Clean Air Act.
- ... The Federal Land Policy and Management Act of 1976.
- ... Public Law 92-476, (DuNoir Special Management Unit legislation).

Numerous concerns related to possible oil and gas operations were identified by the Forest Service, cooperating agencies, and various publics. These concerns, grouped into nine issues, provide the focus for this EIS. The issues are:

- ... How will activities associated with oil and gas exploration and development affect the land, water, air, and vegetation within the Washakie Wilderness?
- ... How will these activities affect primitive recreation?
- ... How will these activities affect the wilderness character?
- ... How will these activities affect wildlife and fish and their habitats?
- ... How will these activities affect the threatened grizzly bear and its habitat, as well as other threatened and endangered species and their habitats?

- ... How will increased access associated with oil and gas exploration affect other resources?
- ... How will oil and gas exploration and development within the Washakie Wilderness affect the national goal of energy independence.
- ... How will these activities affect livestock grazing?
- ... How will these activities affect the socio-economic situation of north-west Wyoming?

Alternatives Including the Proposed Action



Upper Greybull River Drainage

Eleven alternatives were formulated by the Interdisciplinary Team. Each alternative represents a different way of responding to the identified issues. Alternatives authorizing oil and gas activities tend to resolve the issues in favor of subsurface resource development over surface resource protection. The reverse is true for those alternatives which deny or restrict oil and gas activities. Some alternatives attempt to balance the response to individual issues by providing for both surface and subsurface resource management activities. Each alternative considers the issuance of permits as well as oil and gas leases.

When a lease is applied for or granted in areas where no prior oil and gas operations have occurred, the specific activities and their locations are not known in sufficient detail to explicitly assess their impacts. In order to ensure a thorough analysis of the impacts of potential oil and gas activities, the Interdisciplinary Team developed a set of assumptions and analysis guidelines. These are discussed in Chapter II and Appendix A of the EIS.

Four alternatives were eliminated from detailed study for various reasons. For example, they may be similar to other alternatives, not timely in resolving issues, because it is not consistent with current policies, laws or regulations. Following are the alternatives eliminated from detailed study.

CONTINUE PAST PRACTICE REGARDING GEOPHYSICAL INVESTIGATION AND LEASING

This alternative maintains the current management situation within the Washakie Wilderness by deferring all decisions on oil and gas leasing. To obtain information on oil and gas potential, Forest Service geophysical investigation permits would be issued. This alternative was eliminated from detailed analysis because the administrative deferral of decisions on lease issuance is not consistent with law and an interdepartmental agreement which says recommendations and decisions regarding leasing proposals should be made in a timely manner. In addition, this alternative is similar to Alternative II which is considered in detail.

ALLOW GEOPHYSICAL INVESTIGATION AND LEASE WITH NO SURFACE OCCUPANCY

This alternative obtains additional information on oil and gas potential through geophysical investigations while preserving the wilderness character. This alternative was eliminated from detailed analysis because the "Final Standards, Criteria, and Guidelines for Oil and Gas and Mineral Leasing on Designated Wilderness ... and Carter Administration-endorsed Wilderness" published in the Federal Register, Vol. 46, No. 93, May 14, 1981, states, "the no surface occupancy stipulation can be used only for limited areas with specific justification, provided that the opportunity to explore and develop the mineral resources is not unreasonably hindered".

INVESTIGATE AND LEASE FOLLOWING WILDERNESS DECLASSIFICATION AND REDUCE ENVIRONMENTAL CONSTRAINTS

This alternative provides for geophysical investigations along with oil and gas exploration and development consistent with nonwilderness lands through declassification of the Washakie Wilderness. This alternative was eliminated from detailed analysis and further consideration because it is outside Forest Service and BLM jurisdiction. It would require an Act of Congress to declassify the Washakie Wilderness. Additionally, there was no public support for declassification of the Washakie Wilderness expressed during the initial comment period.

INVESTIGATE AND LEASE WITH MINIMUM RESTRICTIONS ON LANDS WITH HIGH TO MODERATE OIL AND GAS POTENTIAL

This alternative emphasizes oil and gas development and production on those lands with a high to moderate oil and gas potential. Environmental constraints are the minimum necessary to protect surface resources. Oil and gas activities are favored over preservation of wilderness character on lands with high or moderate oil and gas potential. It was eliminated from detailed

study because there are insufficient data to determine the location of the high and moderate potential areas. This alternative is similar to Alternative I.

Seven alternatives including the proposed action and the Forest Service preferred alternative were considered in detail. They are:

ALTERNATIVE I - GEOPHYSICAL INVESTIGATION AND LEASING OF THE ENTIRE WILDERNESS (Proposed Action)

This alternative allows geophysical investigations and oil and gas exploration, development, and access throughout the Washakie Wilderness, including essential grizzly bear Situation I habitat. The DuNoir Special Management Unit could be leased with surface occupancy following Congressional determination of the status of the DuNoir area. A corridor one-quarter mile on either side of the Wiggins Fork of the Wind River would be leased with no surface occupancy. The Forest Service would continue to issue geophysical investigation permits. The Forest Service and BLM would respond favorably to pending and future lease proposals.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE I								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		UNSUITABLE FOR LEASING	NO	
				WITH SURFACE OCCUPANCY	WITH NO SURFACE OCCUPANCY ^{1/}		SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No	Yes	No ^{1/ 2/}				WITH SURFACE OCCUPANCY ^{2/}	WITH NO SURFACE OCCUPANCY
731,000 (100%)	Ø	698,100 (95%)	32,900 (5%)	698,100 (95%)	3,900 (1%)	Ø	29,000 (4%)	Ø

^{1/} Lands within a corridor one-quarter mile either side of the Wiggins Fork River from its source to the Wilderness boundary.

^{2/} Lands within the DuNoir Special Management Unit.

ALTERNATIVE II - DENY GEOPHYSICAL INVESTIGATION AND LEASING (No Action)

This alternative emphasizes protection of the Wilderness resource by denying all geophysical investigation and oil and gas exploration and development activities within the Washakie Wilderness. The Forest Service would deny all applications for geophysical investigation permits, and would recommend that the BLM not issue leases. The BLM, in turn, would deny all pending and future lease proposals. As the "no action" alternative required by NEPA, it is used to establish resource and activity baselines for comparison of alternatives.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE II								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		UNSUITABLE FOR LEASING ^{1/}	NO	
				WITH SURFACE OCCUPANCY	WITH NO SURFACE OCCUPANCY		SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No ^{1/}	Yes	No ^{1/}				WITH SURFACE OCCUPANCY	WITH NO SURFACE OCCUPANCY
Ø	731,000 (100%)	Ø	731,000 (100%)	Ø	Ø	731,000 (100%)	Ø	Ø

^{1/} The entire area.

ALTERNATIVE III - GEOPHYSICAL INVESTIGATION AND LIMITED EXPLORATORY DRILLING ON LANDS WITH A HIGH TO MODERATE POTENTIAL OF RESTORATION TO A NEAR NATURAL-APPEARING CONDITION (DEFER LEASING)

This alternative allows geophysical investigations and exploratory drilling to determine the oil and gas potential of the Washakie Wilderness. The Forest Service would issue geophysical investigation permits and allow exploratory drilling where the disturbed lands would be restored to near natural-appearing condition. Decisions by the Forest Service and BLM to issue leases with oil and gas development rights would be deferred pending completion of geophysical investigations and exploratory drilling and a determination by Congress that oil and gas development in the Wilderness is in the public interest.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE III								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		UNSUITABLE FOR LEASING 1/	NO	
				WITH SURFACE OCCUPANCY	WITH NO SURFACE OCCUPANCY		SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No	Yes	No				WITH SURFACE OCCUPANCY	WITH NO SURFACE OCCUPANCY
1/ 731,000 (100%)	Ø	2/ 59,500 (8%)	671,500 (92%)	Ø	Ø	731,000 (100%)	Ø	Ø

1/ The entire area.

2/ Lands with less than 40% slopes, a high to moderate probability of restoration, mostly good to marginal with some areas of poor suitability for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity, outside grizzly bear Situation I habitat. Includes 10,500 acres within the DuNoir Special Management Unit.

ALTERNATIVE IV - GEOPHYSICAL INVESTIGATION AND LIMITED LEASING INCLUDING LANDS WITH A HIGH POTENTIAL OF RESTORATION TO A NEAR NATURAL-APPEARING CONDITION

This alternative provides for geophysical investigation, exploration, development, and access to oil and gas on areas where the probability is high that the disturbed lands would be restored to near natural-appearing condition. Protection of the wilderness character is emphasized over oil and gas activities. Air mobilization of personnel and equipment is required for all activities related to geophysical investigation and exploratory drilling. Roads would be permitted in areas suitable for surface occupancy after the Geological Survey determines oil or gas can be produced in commercial quantities. The Forest Service would issue geophysical investigation permits with stipulations to protect the surface resources. The Forest Service would make leasing recommendations to the BLM which would include stipulations to prevent or control adverse impacts on surface resources and uses and to restore disturbed lands.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE IV								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		NO		
				WITH SURFACE OCCUPANCY 2/	WITH NO SURFACE OCCUPANCY 3/	UNSUITABLE FOR LEASING	SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes 1/	No	Yes 2/	No				WITH SURFACE OCCUPANCY 4/	WITH NO SURFACE OCCUPANCY 5/
49,000 (7%)	682,000 (93%)	3,700 (1%)	727,300 (99%)	3,700 (1%)	45,300 (6%)	682,000 (93%)	1,300 (1%)	7,700 (1%)

1/ Lands available for leasing with and with no surface occupancy.

2/ Lands with less than 40% slope, a high probability of restoration following disturbance, good suitability for occupancy without water quality degradation, low to moderately high visual sensitivity, high visual absorption capacity, and outside of Grizzly Bear Situation I habitat.

3/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing with surface occupancy or within one-half mile of accessible non-wilderness lands.

4/ Lands within the DuNoir Special Management Unit with less than 40% slope, a high probability of restoration following disturbance, good suitability for occupancy without water quality degradation, low to moderately high visual sensitivity, high visual absorption capacity.

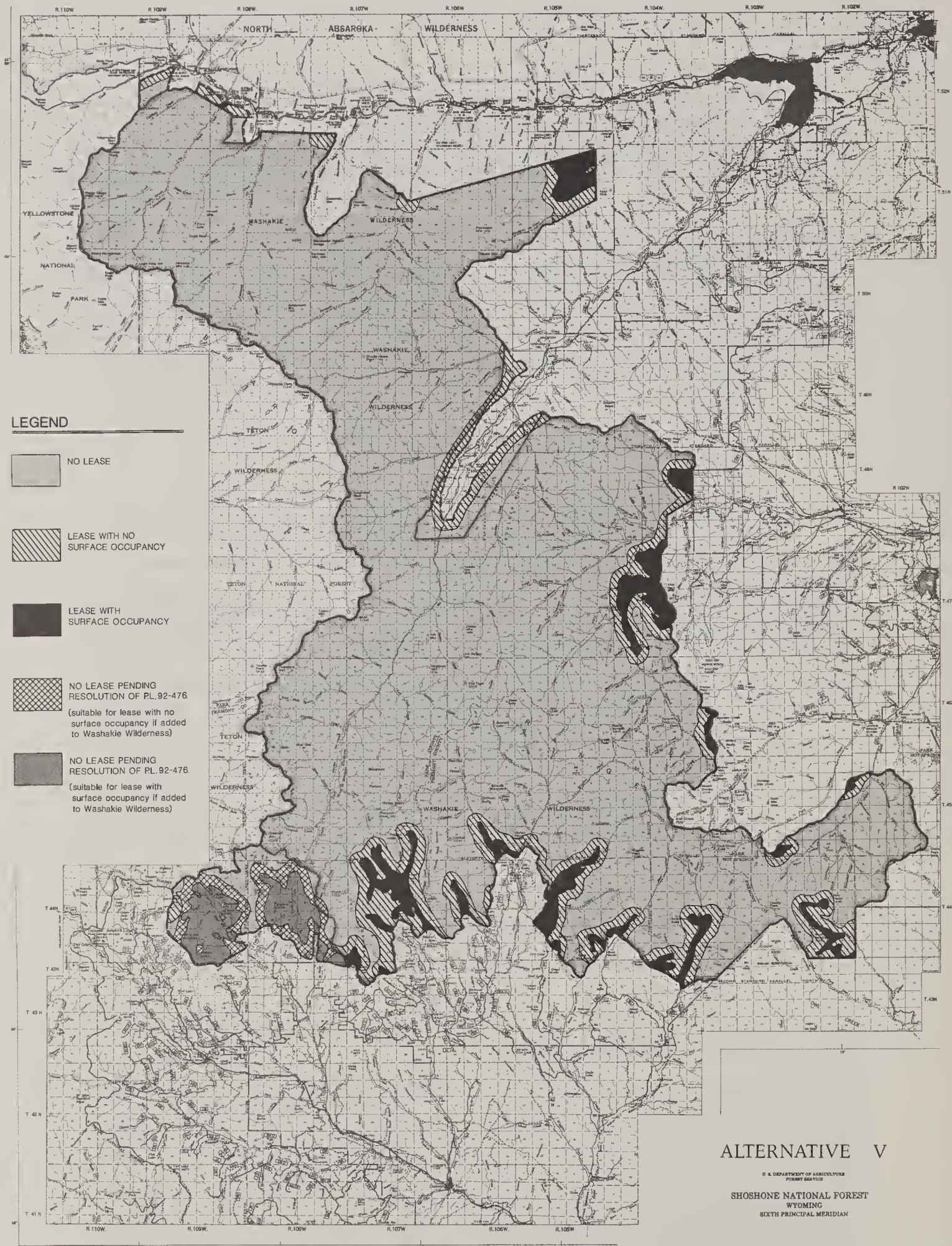
5/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing following resolution of P.L. 92-476.

ALTERNATIVE V - GEOPHYSICAL INVESTIGATION WITH LIMITED LEASING ALONG THE PERIMETER INCLUDING LANDS WITH A HIGH TO MODERATE POTENTIAL OF RESTORATION TO A NEAR NATURAL-APPEARING CONDITION (Forest Service Preferred Alternative)

This alternative allows geophysical investigations on 88 percent of the Wilderness. Oil and gas exploratory drilling, development, and access activities could occur on those lands where the probability is high to moderate that the disturbed lands would be restored to near natural-appearing condition. These lands occur along the perimeter of the Washakie Wilderness. Drill sites, and roads and transmission facilities should commercial quantities of oil and gas be discovered, would be constructed entirely on lands with a moderate or better restoration potential. Three percent of the Wilderness could be leased with surface occupancy and ten percent leased with no surface occupancy. There would be no geophysical investigations or leasing in essential grizzly bear habitat. Geophysical investigation permits issued by the Forest Service and leases issued by the BLM would contain stipulations, mitigation and protection measures to protect the surface resources. Air mobilization of personnel and equipment would be required for geophysical investigations and exploratory drilling.

ALTERNATIVE VI - GEOPHYSICAL INVESTIGATION AND LIMITED LEASING OF LANDS (INCLUDING ISOLATED TRACTS) WITH A HIGH TO MODERATE POTENTIAL OF RESTORATION TO A NEAR NATURAL-APPEARING CONDITION

This alternative allows geophysical investigations on 88 percent of the Washakie Wilderness. This alternative is similar to Alternative V except that isolated tracts are considered suitable for leasing with surface occupancy. Should commercial quantities of oil and gas be discovered, roads and transmission facilities would be constructed across lands with a low restoration potential. Approximately seven percent of the Wilderness would be available for leasing with surface occupancy and an additional 29 percent would be available for leasing with no surface occupancy. The Forest Service would issue geophysical investigation permits with stipulations to protect the surface resources. They would also recommend leasing on areas where the probability is moderate to high that the disturbed lands would be restored to near natural-appearing condition.



ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE V (SEE MAP 2.5)								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		NO		
				WITH SURFACE OCCUPANCY 2/	WITH NO SURFACE OCCUPANCY 3/	UNSUITABLE FOR LEASING	SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No 1/	Yes 2/	No				WITH SURFACE OCCUPANCY 4/	WITH NO SURFACE OCCUPANCY 5/
646,000 (88%)	85,000 (12%)	20,500 (3%)	710,000 (97%)	20,500 (3%)	71,500 (10%)	639,000 (87%)	7,400 (1%)	17,600 (2%)

- 1/ Lands within grizzly bear Situation I habitat.
- 2/ Lands with less than 40% slope, high to moderate probability of restoration following disturbance, mostly good to marginal suitability (with some poor suitability where mitigation is conceivable) for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity, outside grizzly bear Situation I habitat, and accessible from contiguous non-wilderness land.
- 3/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing with surface occupancy or within one-half mile of accessible non-wilderness lands.
- 4/ Lands within the DuNoir Special Management with less than 40% slopes, a high to moderate probability of restoration following disturbance, good to marginal suitability for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity.
- 5/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing following resolution of P.L. 92-476.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE VI								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		NO		
				WITH SURFACE OCCUPANCY 2/	WITH NO SURFACE OCCUPANCY 3/	UNSUITABLE FOR LEASING	SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No 1/	Yes 2/	No				WITH SURFACE OCCUPANCY 4/	WITH NO SURFACE OCCUPANCY 5/
646,000 (88%)	85,000 (12%)	49,000 (7%)	682,000 (93%)	49,000 (7%)	210,000 (29%)	472,000 (64%)	10,500 (1%)	17,500 (2%)

- 1/ Lands within grizzly bear Situation I habitat.
- 2/ Lands with less than 40% slopes, a high to moderate probability of restoration, mostly good to marginal suitability (with some poor suitability where mitigation is conceivable) for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity, and outside grizzly bear Situation I habitat.
- 3/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing with surface occupancy or within one-half mile of accessible non-wilderness lands.
- 4/ Lands within the DuNoir Special Management Unit with less than 40% slopes, a high to moderate probability of restoration, mostly good to marginal suitability (with some poor suitability where mitigation is conceivable) for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity.
- 5/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing following resolution of P.L. 92-476.

ALTERNATIVE VII - GEOPHYSICAL INVESTIGATION AND LIMITED LEASING INCLUDING LANDS WITH A HIGH TO LOW POTENTIAL OF RESTORATION TO A NEAR NATURAL-APPEARING CONDITION

This alternative allows geophysical investigations on 88 percent of the Washakie Wilderness. Oil and gas exploration, development, and access activities would be allowed on lands with a low, moderate, or high probability that the disturbed lands would be restored to near natural-appearing condition.

ACRES AVAILABLE FOR EXPLORATION AND LEASING IN ALTERNATIVE VII								
AVAILABLE FOR GEOPHYSICAL INVESTIGATIONS		AVAILABLE FOR EXPLORATORY DRILLING		AVAILABLE FOR LEASING				
				YES		NO		
				WITH SURFACE OCCUPANCY 2/	WITH NO SURFACE OCCUPANCY 3/	UNSUITABLE FOR LEASING	SUITABLE FOR LEASING FOLLOWING RESOLUTION OF P.L. 92-476	
Yes	No 1/	Yes 2/	No				WITH SURFACE OCCUPANCY 4/	WITH NO SURFACE OCCUPANCY 5/
646,000 (88%)	85,000 (12%)	110,600 (15%)	620,400 (85%)	110,600 (15%)	290,400 (40%)	330,000 (45%)	16,900 (2%)	12,100 (2%)

1/ Lands within grizzly bear Situation I habitat.

2/ Lands with less than 60% slopes, a high to low probability of restoration following disturbance, good, marginal, and poor suitability (not all poor suitability is included) for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity, and outside grizzly bear Situation I habitat.

3/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing with surface occupancy or within one-half mile of accessible non-wilderness lands.

4/ Lands within the DuNoir Special Management Unit with less than 60% slope, high to moderate probability of restoration following disturbance, good to marginal suitability for occupancy without water quality degradation, low to high visual sensitivity, high to moderate visual absorption capacity.

5/ Lands within one-half mile of the perimeter of areas identified as suitable for leasing following resolution of P.L. 92-476.

Affected Environment

The Washakie Wilderness is located in the Absaroka Mountains in the Shoshone National Forest in northwest Wyoming. It adjoins the southeastern portion of Yellowstone National Park; the Teton Wilderness is to the west. The 731,000-acre Wilderness is one of the largest relatively undisturbed areas in the lower 48 states. The entire area was originally part of the Yellowstone Timberland Reserve established on March 30, 1891. The forest reserves became National Forests in 1907.

In 1932, a portion of the Washakie Wilderness was established as the South Absaroka Wilderness Area and the remainder was included in the Stratified Primitive Area. These areas were combined and designated by Congress as the Washakie Wilderness on October 9, 1972. Over the years, Forest Service management of the area emphasized primitive outdoor recreation opportunities. Livestock grazing is permitted in portions of the area. The area has had little disturbance by human activities.



Bliss Creek Meadows

During the past few months, the Interdisciplinary Team, with help from cooperating agencies, collected available information regarding the physical, biological, social, and economic environments in and adjacent to the Washakie Wilderness. Some of the information regarding the surface resources is based on extrapolation and interpretation of detailed data from adjacent non-wilderness lands. Whenever possible, the interpretations and extrapolations were verified through consultation with individuals familiar with the area or by field reconnaissance. Information regarding the subsurface resources is limited.

The lower elevations are characterized by forested drainages and steep mountainsides. Vegetation includes pine, spruce, fir, and aspen, with riparian vegetation along the stream drainages. Open grass-covered slopes and bare cliffs are common throughout the area.

Above 10,000 feet, the landscape is highlighted by rugged rocky peaks. The higher elevations contain cirque basins, glacial valleys, cliffs, talus slopes, and boulder fields. Vegetation is predominantly low tundra types on the gentle sites. Much of the surface is bare rock. Some conifers exist in scattered patches in sheltered sites.

Geologically, this is a relatively young area (less than 60 million years old). Most soils are highly erodable. Weathering has produced series of formations such as natural bridges, pinnacles, fluted cliffs, vertical rock faces, jagged ridges, sawtooth peaks, and exposed hardrock dikes.

The air quality is excellent. Water quality is unimpaired and related to the individual characteristics of riparian areas, floodplains, and wetlands.

The Washakie Wilderness includes large expanses of undisturbed habitat for many species of wildlife including elk, deer, bighorn sheep, and many non-game species.

The major recreation experience opportunity provided by the Washakie Wilderness is primitive and unconfined. Compared to other Wildernesses, the Washakie Wilderness receives a low amount of recreation use. A majority of the use occurs on about five percent of the land area. The low use, coupled with the undisturbed natural surroundings, provide outstanding opportunities to experience solitude.

Little is known about the presence of cultural resources in the Washakie Wilderness; the area was used by Indians and early day trappers.

The Geological Survey Open File Report 81-667 evaluates the oil and gas potential based on data from wells drilled outside the Wilderness and the projection of structural and stratigraphic trends into the Wilderness. The Wilderness is classified as high, moderate, low, or unknown potential for oil and gas.

The Wilderness is located in Fremont, Hot Springs, and Park Counties. Historically, agriculture and tourism have contributed to the stability of the local economy. Oil and gas production have contributed to the economy for many years. Recently, energy development has gained in importance and now contributes to both economic and population growth. The Wind River Indian Reservation has experienced slow and steady population and economic growth. Its economy is oriented towards oil and gas production.

Environmental Consequences



Washakie Needles viewed from Bear Creek Pass

The physical, biological, social, and economic consequences of implementing the proposed action and alternatives to it have been analyzed. Alternative II is the "no action" alternative. In general, the consequences of implementing an alternative are directly related to the acres available for geophysical investigations and oil and gas leasing. The more acres available for investigations and leasing, the more likely the possibility of development and the greater the likelihood of impacts on the physical, biological, and social and economic environments.

Readers should be aware that the activities to be conducted when a lease is applied for are not usually known in sufficient detail to explicitly assess their impacts. The actual consequences of the activities depend on their extent, location, and timing. As it is impossible to anticipate if, where, and when the activities will occur, the Interdisciplinary Team developed a set of assumptions and analysis guidelines concerning the amount, location, and timing of the activities associated with different phases of oil and gas operations to focus the analysis. The Interdisciplinary Team relied on literature reviews, published research findings, consultation with other experts and specialists, assistance from cooperating agencies, and their professional training and experience to develop assumptions and to estimate the consequences of the alternatives considered in detail.

It is possible, although highly unlikely, that every acre identified as suitable for occupancy in a particular alternative would be affected. Based on this possibility, an extreme or "worst case" set of effects is discussed for each resource element by alternative except Alternative II. It is also possible, and equally unlikely, that none of the acres identified as suitable for occupancy would be affected. The minimum or zero effect level is not displayed for each alternative but can be visualized by referring to Alternative II, the "no action" alternative. The estimated effects for the extreme level and for a more likely assumed level are used to illustrate the relative difference among alternatives. The assumed level consequences ranges from 10 to 30 percent of the extreme (the "worst case") level.

A comparison of the environmental consequences of implementing the alternatives is summarized in the following table.

COMPARISON OF ALTERNATIVE CONSEQUENCES

RESOURCE ELEMENT	ALTERNATIVES													
	I		II		III		IV		V		VI		VII	
	D	A	D	A	D	A	D	A	D	A	D	A	D	A
<u>PHYSICAL - BIOLOGICAL</u>														
Soil Productivity	●	●	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	●
Water Resources	●	●	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	●
Wildlife	●	◐	○	○	◐	○	◐	○	◐	○	○	○	●	○
Threatened and Endangered Species ..	●	●	○	○	○	○	○	○	○	○	○	○	○	○
Vegetation	●	●	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	●
Range	◐	○	○	○	◐	○	◐	○	◐	○	◐	○	◐	○
Outdoor Recreation	●	◐	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	◐
Wilderness	●	●	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	◐
Visual Quality	●	●	○	○	◐	◐	◐	◐	◐	◐	◐	◐	●	●
Roads Within Wilderness	●	○	○	○	○	○	◐	○	◐	○	○	○	●	○
	<u>OVERALL</u>		<u>OVERALL</u>		<u>OVERALL</u>		<u>OVERALL</u>		<u>OVERALL</u>		<u>OVERALL</u>		<u>OVERALL</u>	
<u>SOCIO - ECONOMIC</u>														
Area available for:														
... geophysical investigations (acres))	731,000		∅		731,000		49,000		646,000		646,000		646,000	
... leasing with surface occupancy (acres)	698,100		∅		∅		3,700		20,500		49,000		110,600	
... leasing with no surface occupancy (acres)	3,900		∅		∅		45,300		71,500		210,000		290,400	
Peak Year employment increase	1,400		∅		540		175		400		800		1,300	
Peak Year population increase (number)	2,800		∅		1,000		350		850		1,600		2,700	
Peak Year total income added to Region (MM \$)	123.1		∅		14.8		4.3		9.9		20.1		32.9	
Present Net Value (millions of 1978 dollars, 4% discount rate)	11,053		80		-1,471		1,073		2,269		5,511		9,650	
Benefit/Cost ratio (4% disc. rate) ...	4.31 : 1		10.9 : 1		0.03 : 1		3.51 : 1		3.46 : 1		3.69 : 1		3.93 : 1	
Forest Service Adm. Cost for Minerals and Special Use (millions of 1978 \$) ..	\$.85		∅		\$.20		\$.04		\$.14		\$.38		\$.69	
Energy Produced (BBTUs)	14,200,000		∅		∅		1,400,000		3,100,000		7,700,000		12,900,000	
Energy Consumed (BBTUs)	12,400		1,600		5,000		3,500		4,700		8,600		12,300	

NOTES: "D" represents adverse effects DURING a peak year of operations; "A" adverse effects five years AFTER abandonment. Employment, population, and administrative cost values are for a peak year during operations.

ENVIRONMENTAL IMPACTS:

Very high
 High
 Moderate
 Low
 None



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